



Opportunities Abound, the Southern Automotive Industry

Current State and Future Head Winds



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President & CEO

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Harbour Results Credentials

- ⊕ Operations and strategy consulting firm serving manufacturing clients.
- ⊕ Over 50 manufacturing/tooling assessments performed globally each year.
- ⊕ Tool supplier certification group for major N.A. automotive OEM, working with other OEMs on tooling strategies.
- ⊕ Working with tooling and manufacturing (plastics, stamping, machining, etc.) companies in N.A. to improve performance, throughput, strategy and overall profitability.
- ⊕ Recent assessments in the U.S., Canada, Europe, China and Korea.
- ⊕ Published the landmark 2013 Automotive Vendor Tooling Study in Oct. 2013.
- ⊕ Quarterly co-facilitate the OESA Tooling Forum since 2012.
- ⊕ Benchmark database of 400+ manufacturing and 180 tooling assessments.
- ⊕ Currently doing additional benchmarking in tooling and manufacturing, extending to other industries (consumer, medical, appliance, etc.) and developing on-going information to be launched in 2015.

Current State of the Economy

- ✓ Manufacturing is flat; automotive is up; non-auto not growing as fast
- ✓ Market growth and GDP
- ✓ Multiple challenges
 - Healthcare
 - Acquisitions/mergers
 - Market instability
- ✓ Hot and cold markets leading to a lot of “wait and see”

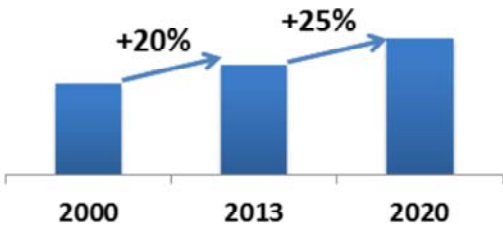


Current State of Manufacturing



Current State of Manufacturing

Number of Tools per Vehicle



2004 Chevy Impala



2014 Chevy Impala



Current State of Manufacturing

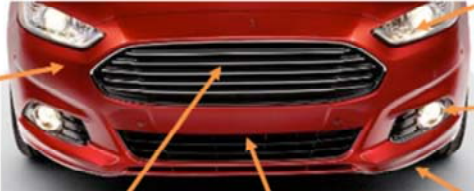
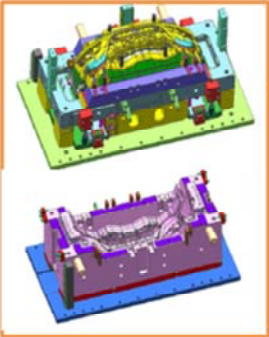


Motorola Cellular

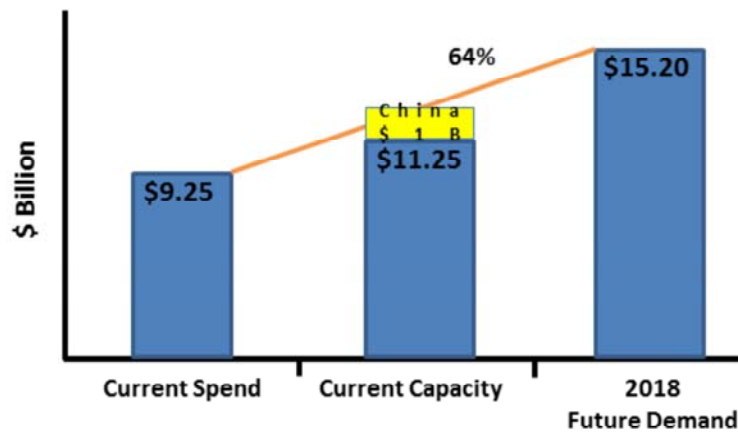


Vendor Tooling Facts

- There are 7,000+ tools to make a vehicle
 - The study focused on the 3000+ critical die and mold tools
- Tools range in value from \$5K to \$1M
 - Example: front fascia tool ranges from \$500K to \$1M with 35+ more tools to make the complete assembly (excludes lighting)



N.A. Automotive Vendor Tooling Projection



- *Current Spend* = the total of 10 OEMs current annual spend on vendor tooling in N.A.
- *Current Capacity* = tool suppliers are 90% + auto tool makers, can manufacture 100% of the complete tool, die and mold only, and willing and able to grow with the industry.
- *2018 Future Demand* = based on 2012 baseline and estimated N.A. model launches (all new and major); Source: LMC Automotive, IHS, OEM Interviews and HRI Estimates.

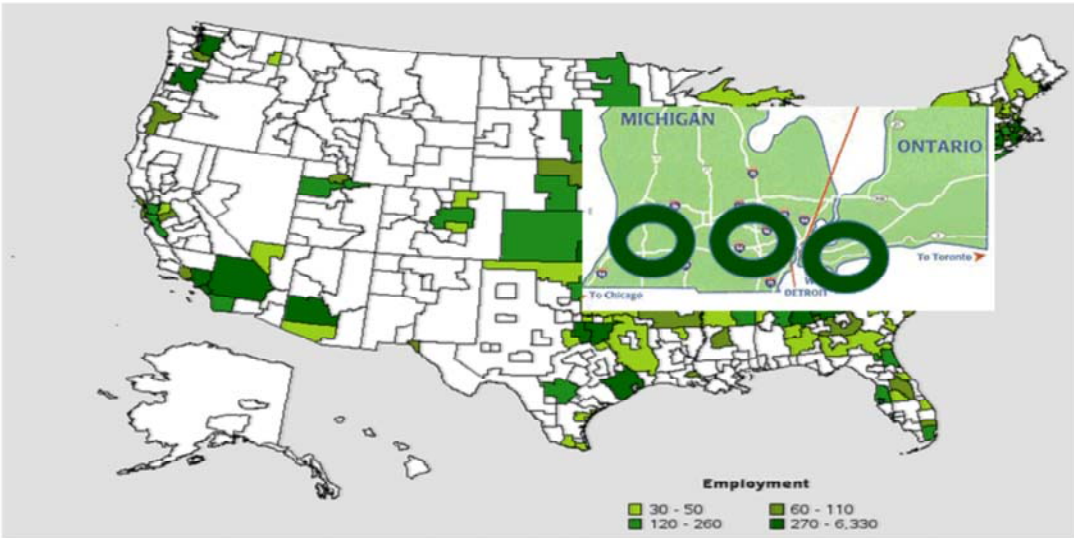
Future Demand Assumptions

- Constant/growing spend for Detroit 3 for next 5 years
- Foreign investment pouring into N.A. in the next 5 years
- Significant number of new vehicle launches
- Dramatic in-sourcing of tools from Japan/Europe to N.A.
- Added complexity/customization driving more tools per vehicle (20 – 25%) in the next 5 years
- Potential re-shoring of tools from LCC or demand from non-auto industries for tools was not factored into this analysis

Will China Solve the Capacity Challenge?

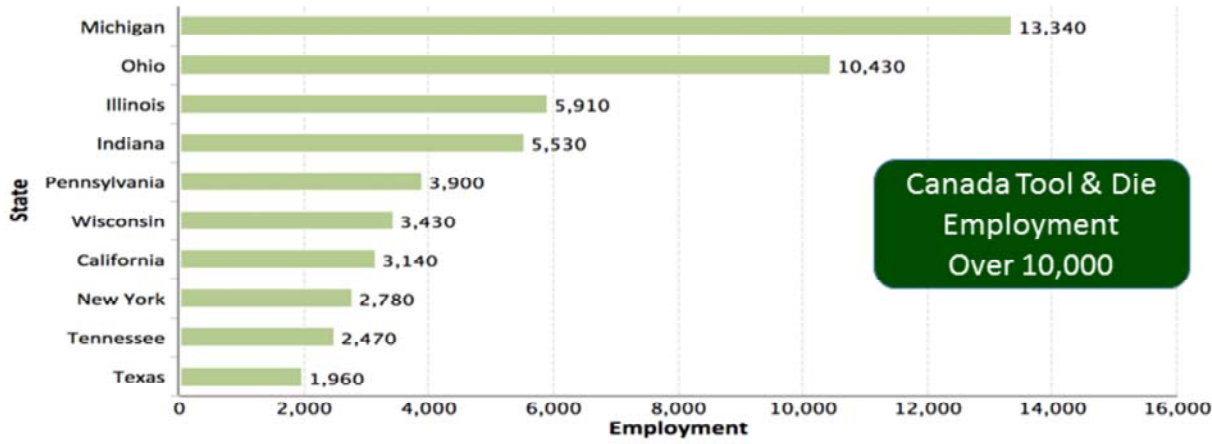
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- Labor Rates / Efficiency
 - Other Rising Costs
 - High Volume / Low Mix Model
 - Lead Time
 - Payment Terms
(internal vs. export)
 - 30M Units Production

Concentration of Tooling Suppliers in US/Canada



Source: U.S. Bureau of Labor Statistics & BCS

U.S. States with Highest Employment – Tool & Die



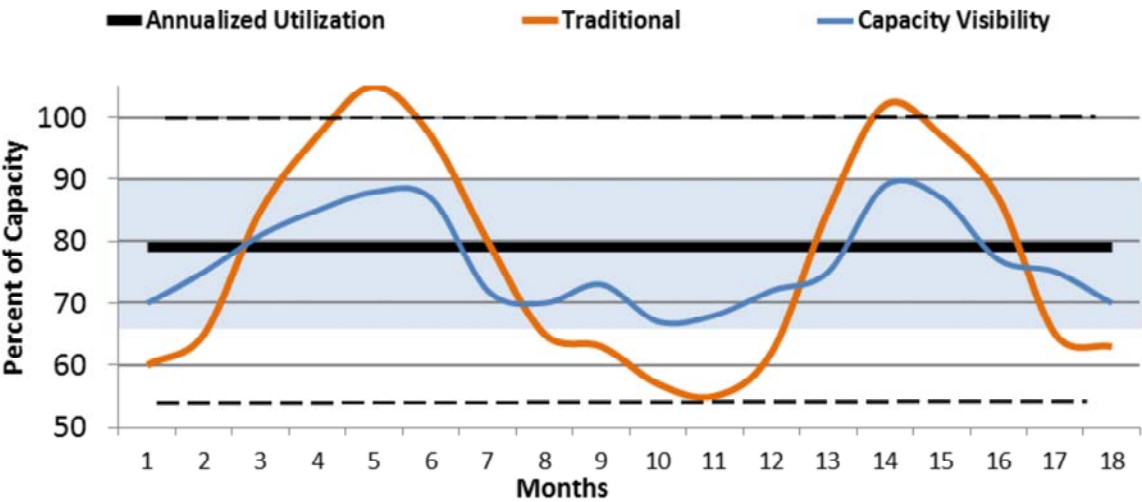
Source: U.S. Bureau of Labor Statistics & BCS

Shift to South and Mexico – But for Tooling . . .

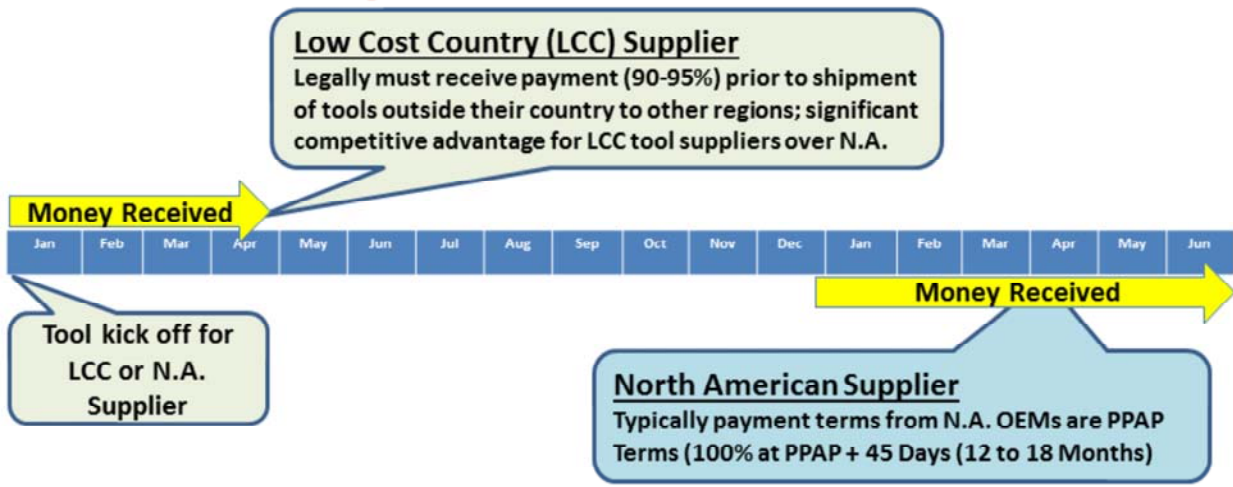
- Production shift to South/Mexico
- Lack of interest for tool suppliers to support southern migration
- Lack skilled labor in South/Mexico
- German/Korean/Chinese consider these areas

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- 17% of all U.S. tool & die labor is located in the Southern U.S.
 - Less than 2,000 in tool & die in Mexico
 - 2010 production of 2.5M units; 2020 – 4.8M
 - Foreign production 48% in 2010; up to 59% in 2020

The Life of a Tool Supplier



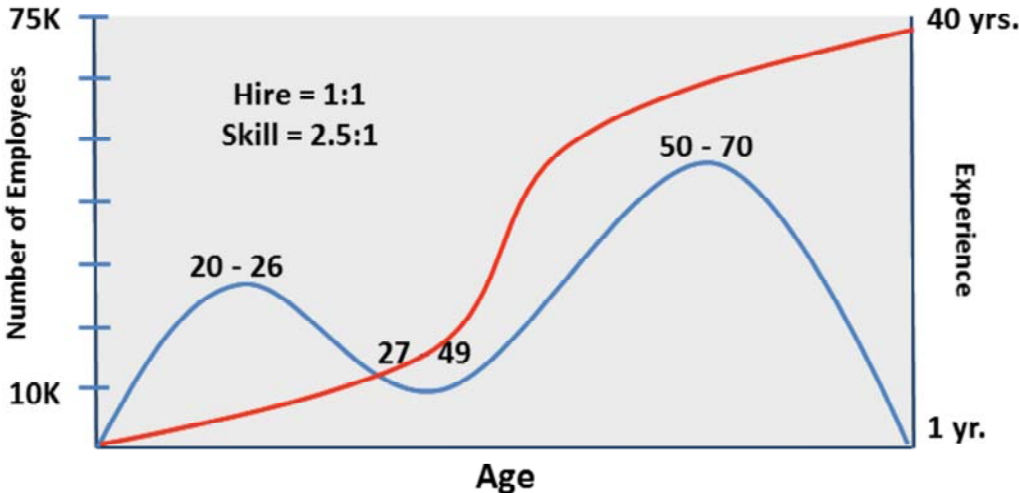
Variation in Payment Terms



Study concludes that tooling suppliers with OEM PPAP payment terms received payment an avg. 16 months after tool kick-off

The Talent Gap

Average Age of a Skilled Worker in the U.S. = 56



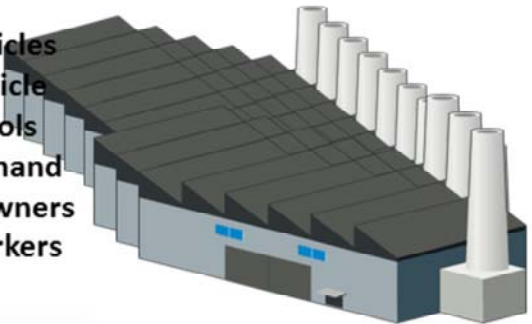
Best Practices: Recruiting the Next Generation



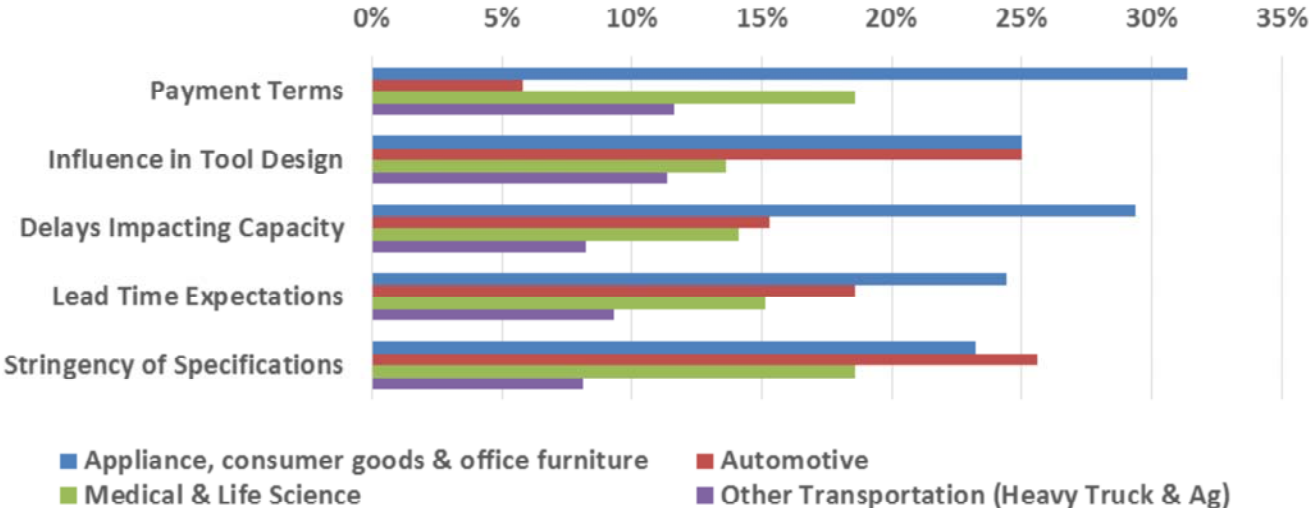
Headwinds on Supply and Demand



- Launch of new vehicles
- More tools per vehicle
- Insourcing foreign tools
- Other industry demand
- Age of tool shop owners
- Average age of workers
- Risk is too high



Which Of The Key Industries Is Best?

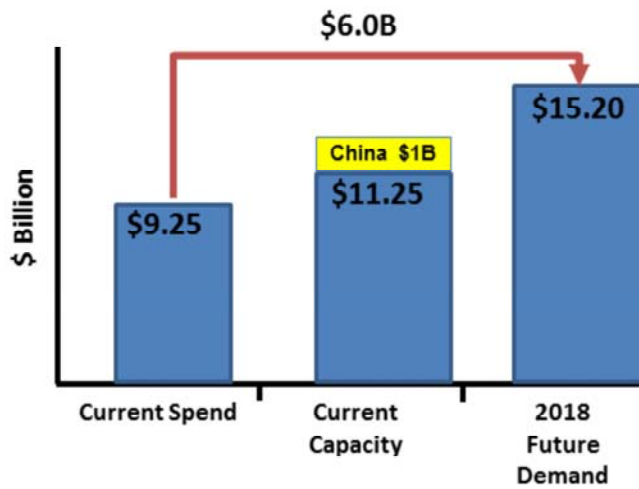


Source: HRI-OESA Tooling Study – Sept 2013



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How Does the Industry Close the Gap?



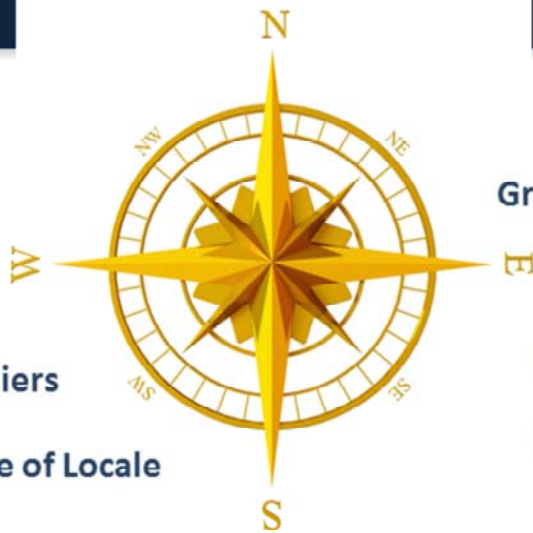
- + Current tool supplier throughput or capacity growth (+10%) that they control
- + Additional tool supplier capacity in N.A. with new plants from Germans/Chinese/Koreans
- + More capacity/sourcing to China or other low cost country regions
- + Some sourcing from Europe
- Loss of skilled trades

HRI estimates a \$2.0 to 2.5B gap after these adjustments

Head Winds for the Next 5 to 10 Years

Customer

- Price Pressures
- Lead Time Pressures
- Complexity
- Expectations of Suppliers
- Opportunities Outside of Locale



Industry

- Growth in Mexico
- Growth of Foreign OEMs
- Ease of Entrance into Industry
- Forced Fragmentation
- Connectivity/Multiple Media Integration

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Thank you for the Opportunity

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